

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,032,719 B2
DATED : April 25, 2006
INVENTOR(S) : Takachi

Page 1 of 7

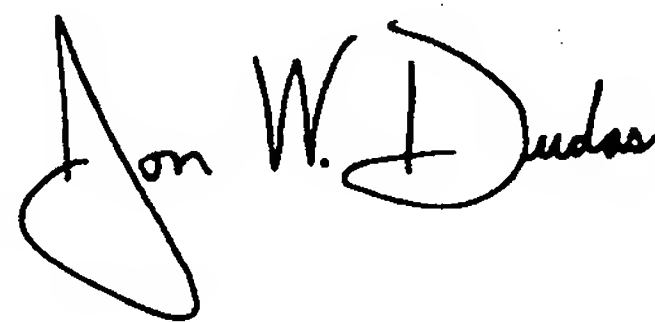
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The title page, showing an illustrative figure, should be deleted and substitute the attached title page.

Delete drawing sheets 1-5 and substitute the drawing sheets consisting of FIGS 1-5 as shown on the attached pages.

Signed and Sealed this

Sixth Day of June, 2006

A handwritten signature in black ink, reading "Jon W. Dudas". The signature is stylized, with a large loop for the "J" and a cursive "Dudas".

JON W. DUDAS
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Takachi

(10) Patent No.: **US 7,032,719 B2**
(45) Date of Patent: **Apr. 25, 2006**

(54) **BICYCLE HUB WITH AN
OUTSIDE-ACCESSIBLE BRAKE FORCE
ADJUSTING MECHANISM**

(75) Inventor: **Takeshi Takachi, Kawachinagano (JP)**

(73) Assignee: **Shimano, Inc., Sakai (JP)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/604,814**

(22) Filed: **Aug. 19, 2003**

(65) **Prior Publication Data**
US 2004/0104082 A1 Jun. 3, 2004

(30) **Foreign Application Priority Data**
Aug. 22, 2002 (JP) 2002-241795

(51) Int. Cl.
B62L 5/00 (2006.01)
B60T 1/06 (2006.01)

(52) U.S. Cl. 188/26; 188/17

(58) Field of Classification Search 188/17,
188/24.11, 26; 301/110.5, 105.1

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,799,472 A * 3/1974 Svensson 242/270
4,109,762 A * 8/1978 Wood 188/26
5,456,336 A * 10/1995 Bopp 188/17
5,570,760 A * 11/1996 Lai 188/26
6,559,564 B1 * 5/2003 Ito 310/67 A
2003/0057032 A1 * 3/2003 Liu 188/24.11

FOREIGN PATENT DOCUMENTS

EP 688 713 A2 12/1995
EP 1122094 A2 * 8/2001

OTHER PUBLICATIONS

Patent Abstracts of Japan, vol. 018, No. 605 (M-1706), published Nov. 17, 1994; for JP 06-227472 A (Nakano), published Aug. 16, 1994.

* cited by examiner

Primary Examiner—Thomas Williams

(74) Attorney, Agent, or Firm—James A. Deland

(57) **ABSTRACT**

A bicycle hub comprises a hub shaft structured to be rotatably mounted to a bicycle frame, a hub shell rotatably supported relative to the hub shaft, and a brake force control mechanism housed by the hub shell. The brake force control mechanism includes a brake force adjusting mechanism that can be accessed for adjustment while the brake force control mechanism is housed within the hub shell.

26 Claims, 5 Drawing Sheets

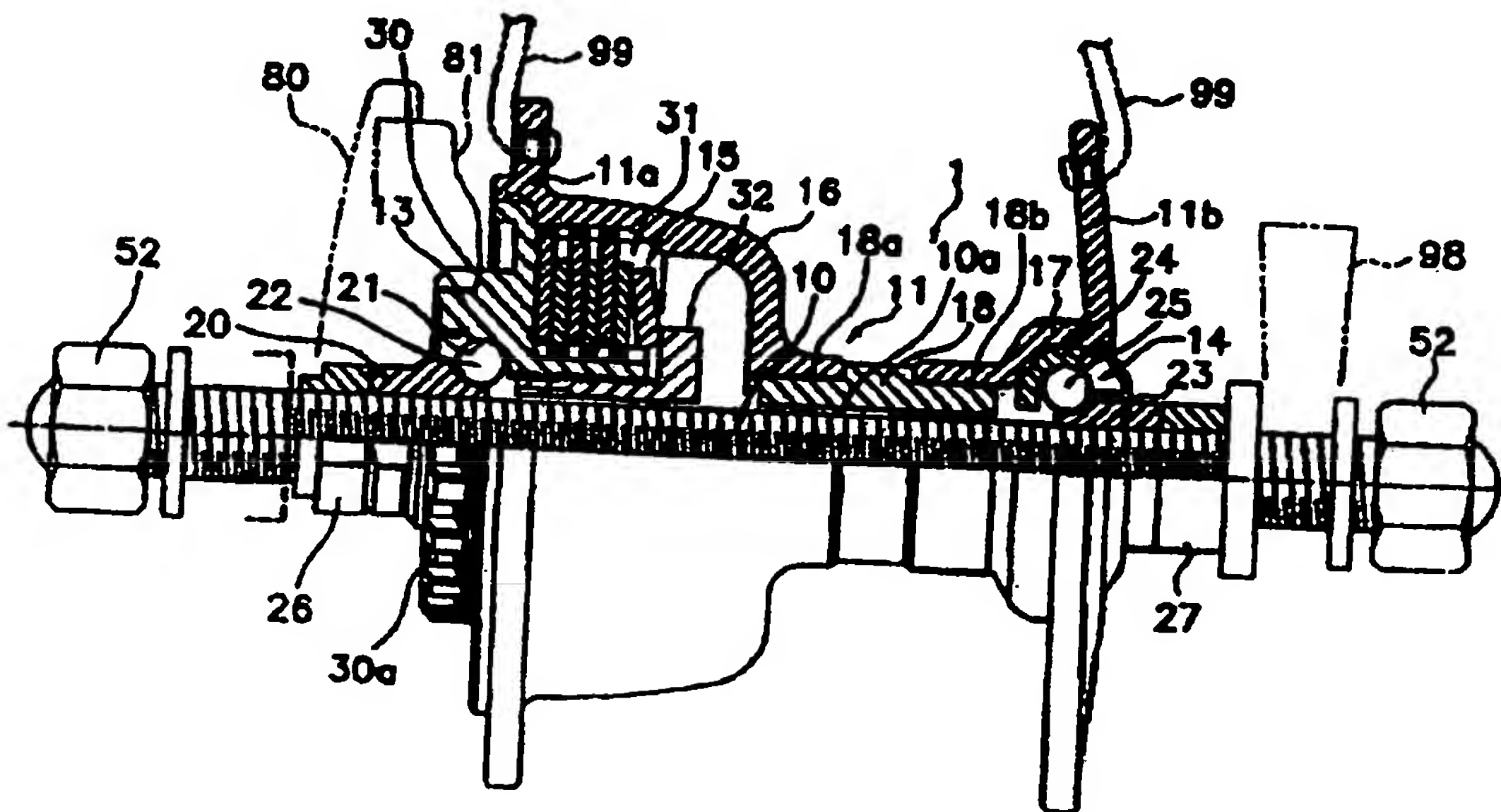
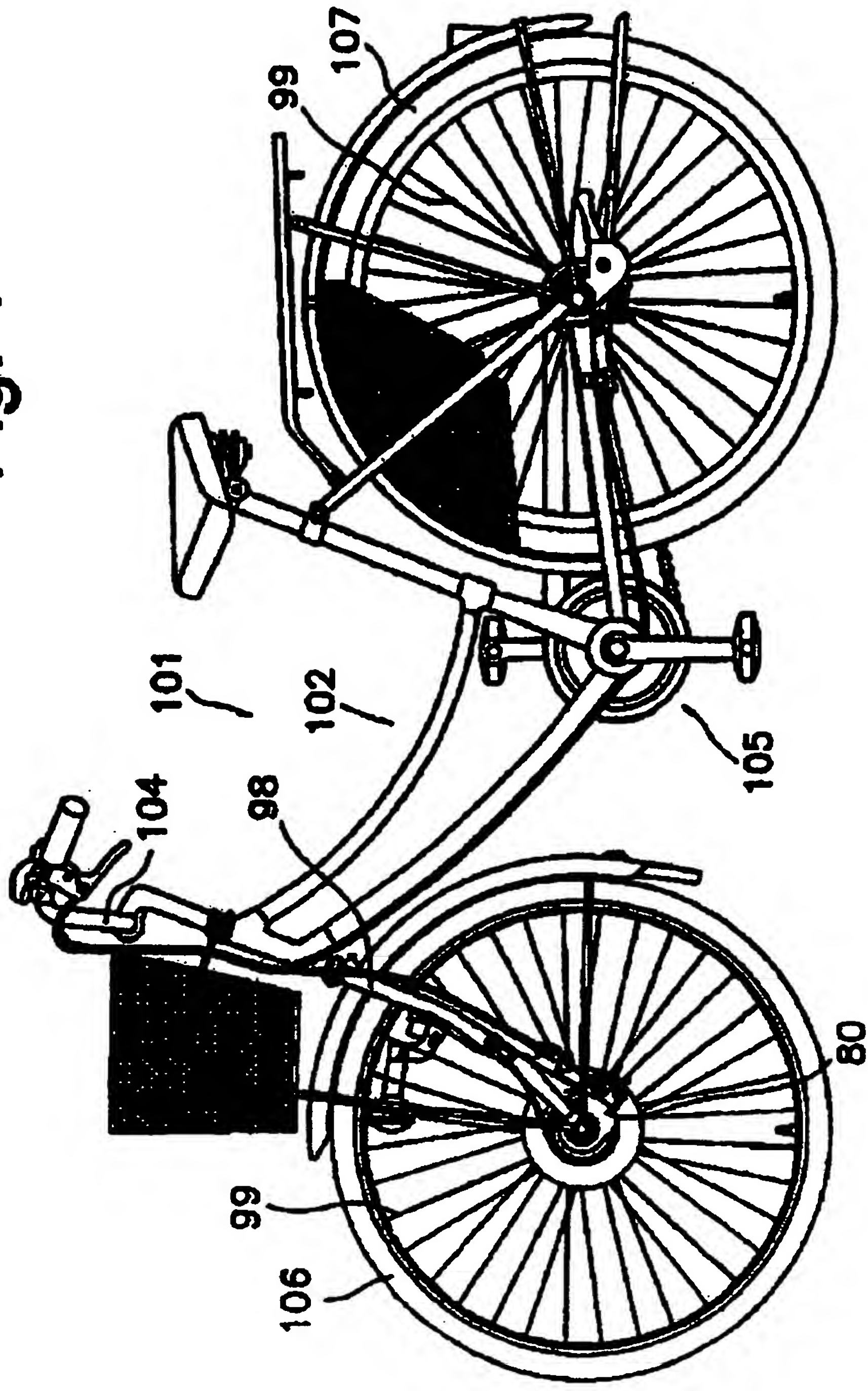


Fig. 1



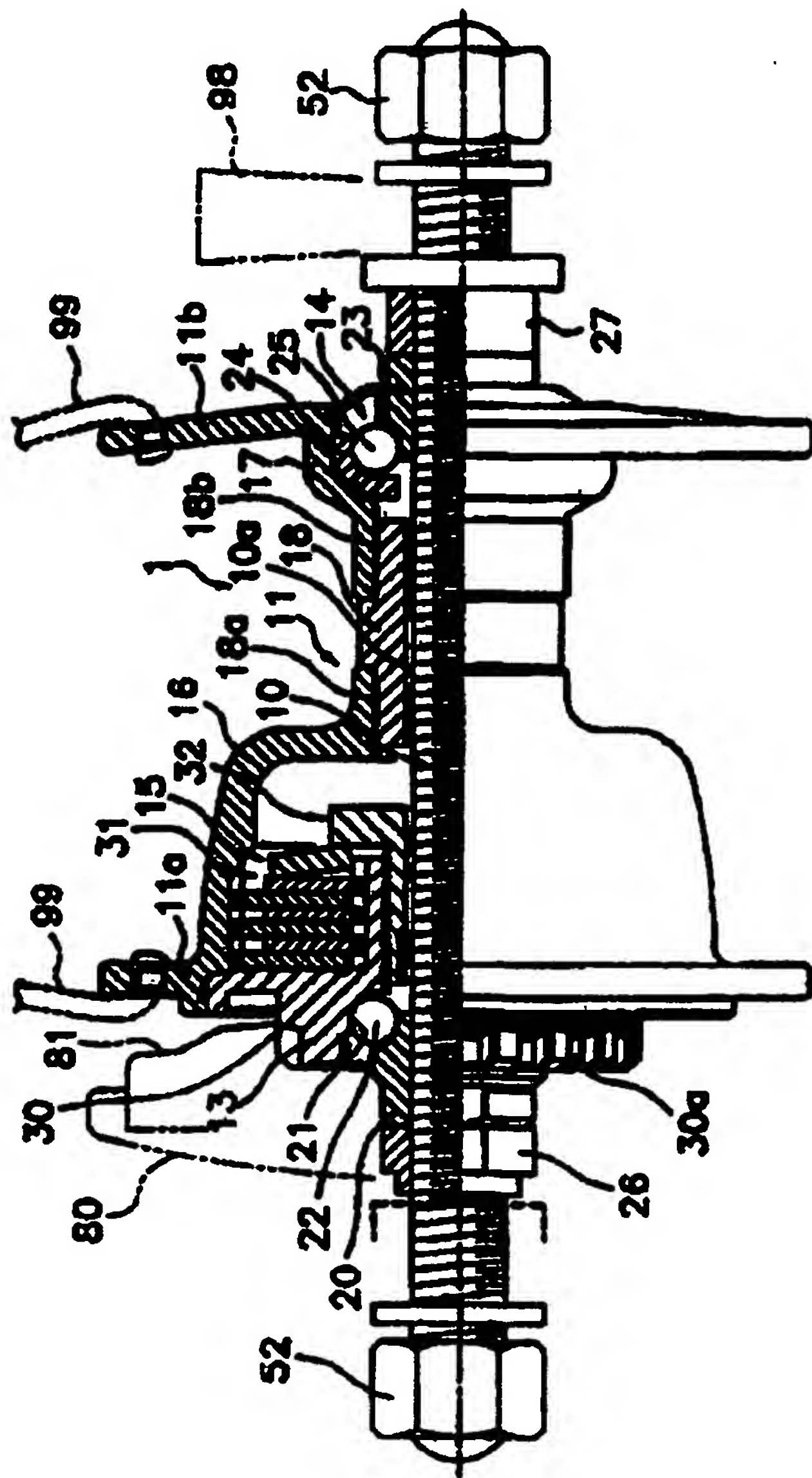
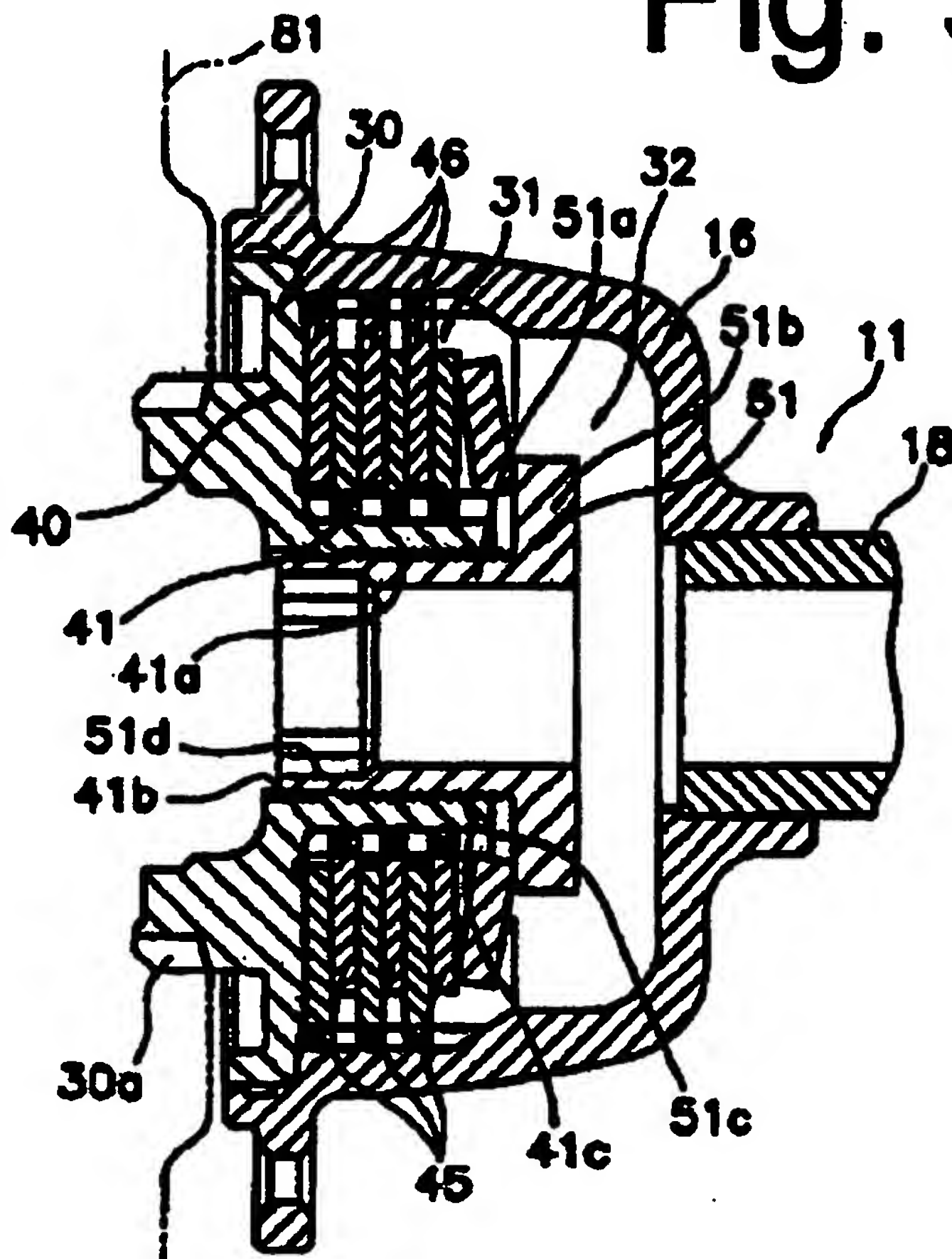


Fig. 2

Fig. 3



U.S. Patent

Apr. 25, 2006

Sheet 4 of 5

7,032,719 B2

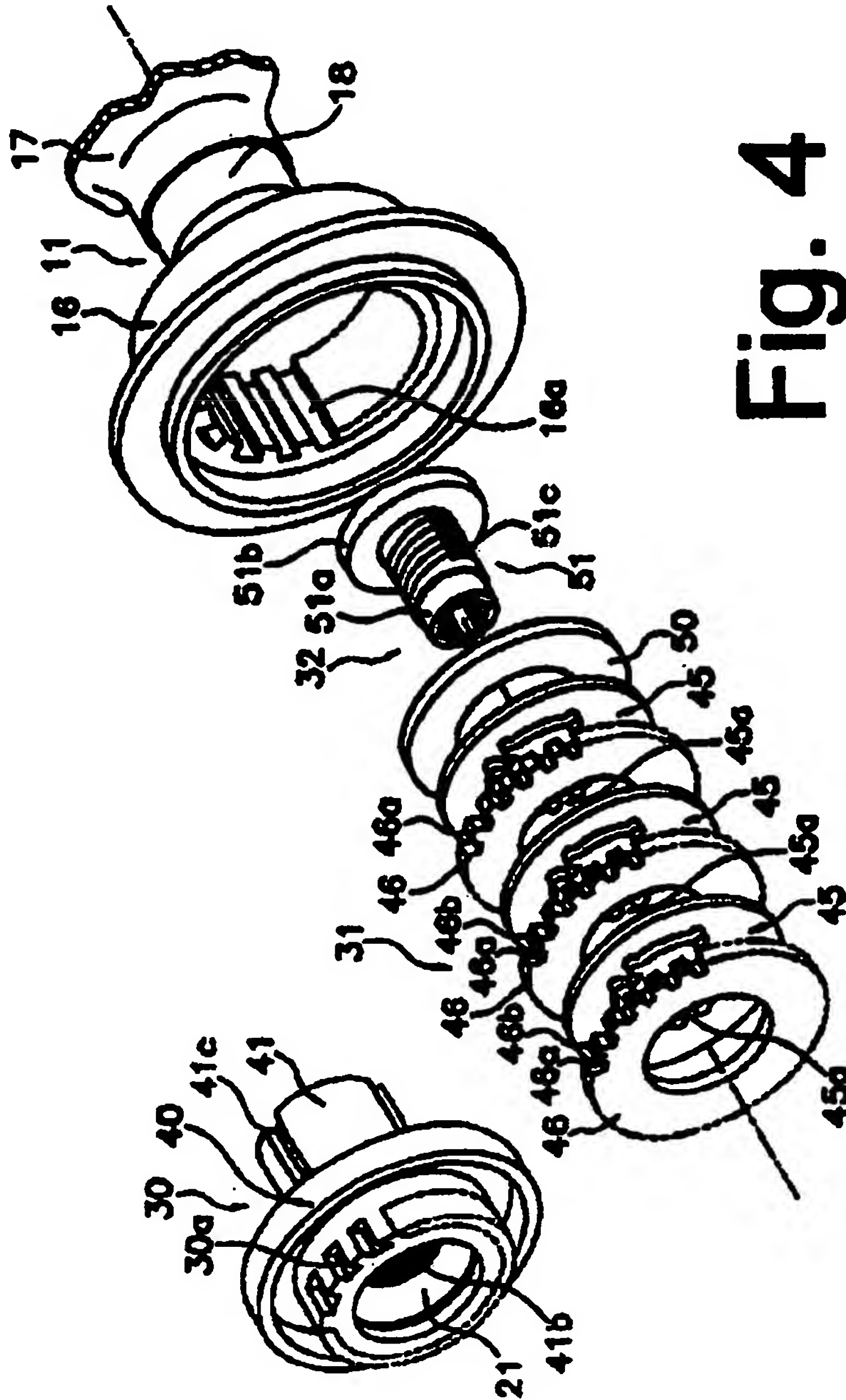


Fig. 4

Fig. 5

